



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,974	05/08/2001	Teruo Matsui	Q64407	1296

7590 03/29/2005
SUGHRUE, MION, ZINN, MACPEAK & SEAS
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3202

EXAMINER

WARE, CICELY Q

ART UNIT PAPER NUMBER

2634

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p>09/849,974</p>	<p>Applicant(s)</p> <p>MATSUI ET AL.</p>	
	<p>Examiner</p> <p>Cicely Ware</p>	<p>Art Unit</p> <p>2634</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on amendment filed on 10/21/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 14-18 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 8 is/are rejected.
- 7) ☒ Claim(s) 3-7 and 9-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see **REMARKS**, filed 10/21/2004 with respect to the rejection(s) of claim(s) 1 and 2 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Masak (US Patent 4,280,128).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted prior art (Fig. 1) in view of Masak (US Patent 4,280,128)

(1) With regard to claim 1, Applicant's admitted prior art discloses in (Fig. 1) transmitting-receiving station for use in radio wave diversity comprising two antennas (121, 131) having a predetermined distance there between for use of space-diversity, a distributor-composer (130) and a transceiver (40).

However Applicant's Admitted prior art does not disclose at least one prefixed adjuster supplied between a first one of two antennas and said distributor-composer for

manually adjusting and fixing at least one of a phase, level or delay time of a signal from or to the first one of said two antennas so as to be within a predetermined range of a phase, level or delay time of a signal from or to a second one of said two antennas.

However Masak discloses in (Fig. 2 and Fig. 3) at least one prefixed adjuster (Fig. 2 (26), Fig. 3(65, 75, 76)) supplied between a first one of two antennas (Fig. 2(22), Fig. 3 (61, 62)) and said distributor-composer (Fig. 2 (23)) for manually adjusting and fixing at least one of a phase, level or delay time of a signal from or to the first one of said two antennas so as to be within a predetermined range of a phase, level or delay time of a signal from or to a second one of said two antennas (col. 3, lines 15-17, 20-29, 34-38, 40-44, col. 4, lines 38-40, col. 5, lines 8-13).

Therefore it would have been obvious to one of ordinary skill in the art to modify the Applicant's admitted prior art in view of Masak to incorporate at least one prefixed adjuster supplied between a first one of two antennas and said distributor-composer for manually adjusting and fixing at least one of a phase, level or delay time of a signal from or to the first one of said two antennas so as to be within a predetermined range of a phase, level or delay time of a signal from or to a second one of said two antennas in order to protect the receiver from interference and prevent information from the transmitter from being intercepted (Masak, col. 1, lines 59-62).

(2) With regard to claim 2, Applicant's admitted prior art further discloses in (Fig. 1) a distributor-composer (130) connected to said two antennas (131, 121), for distributing a signal transmitted from a transceiver (40), and for composing signals

received from said two antennas and a transceiver (40) connected to a said distributor-composer (130) (Pg. 2, lines 1-24).

(3) With regard to claim 8, Applicant Admitted Prior Art discloses in (Fig. 1) a transmitting-receiving station for use in radio wave diversity comprising: a first antenna (121) for receiving and transmitting a first signal; a second antenna (131) for receiving and transmitting a second signal and which is separated from the first antenna by a predetermined distance; a distributor-composer (130) connected to the first and second antennas; a transceiver (40) connected to the distributor-composer.

However Applicant's Admitted Prior Art does not disclose at least one prefixed adjuster supplied between the first antenna and the distributor-composer, wherein the prefixed adjuster is configured to adjust and hold at least one of a phase, level or time delay of the first signal so that said at least one of a phase, level or delay time is within a predetermined range of a phase, level or delay time of the second signal.

However Masak discloses in (Fig. 2) at least one prefixed adjuster (26) supplied between the first antenna and the distributor-composer (23), wherein the prefixed adjuster is configured to adjust and hold at least one of a phase, level or time delay of the first signal so that said at least one of a phase, level or delay time is within a predetermined range of a phase, level or delay time of the second signal (col. 3, lines 24-28, 59-61, col. 4, lines 3-12).

Therefore it would have been obvious to one of ordinary skill in the art to modify Applicant's Admitted Prior Art in view of Masak to incorporate wherein at least one prefixed adjuster supplied between the first antenna and the distributor-composer,

Art Unit: 2634

wherein the prefixed adjuster is configured to adjust and hold at least one of a phase, level or time delay of the first signal so that said at least one of a phase, level or delay time is within a predetermined range of a phase, level or delay time of the second signal in order to protect the receiver from interference and prevent information from the transmitter from being intercepted (Masak, col. 1, lines 59-62).

Allowable Subject Matter

4. Claims 3-7 and 9-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a transmitting-receiving station for use in radio wave diversity. Prior art references show similar methods but fail to teach: **“wherein at least one prefixed adjuster comprises a phase prefixed-adjuster, a level prefixed-adjuster and a delayed prefixed-adjuster serially connected”**, as in claims 3 and 9; **“wherein said phase prefixed-adjuster has an adjustable construction for moving a position of said first one of said two antennas connected thereto towards or away from a transmission direction of a signal”**, as in claims 4 and 10; **“wherein said level prefixed-adjuster comprises a plurality of fixed attenuators being set to a level selection”**, as in claims 5 and 11; **“wherein said delayed prefixed-adjuster comprises a plurality of fixed delay elements being set to a level selection”**, as in claims 6 and 12; **“wherein said phase prefixed-adjuster adjusts the phases of said signal from or to said first**

one of said two antennas to the same value as the phase of the signal from or to said second one of said two antennas by a fine control, said level prefixed-adjuster adjusts the level of said signal from or to said first one of said two antennas to a level value with 10db of the signal from or to said second one of said two antennas, and said delayed prefixed-adjuster adjusts a delay time of said signal from or to said first one of said two antennas to a delay time value within 1.01ns of said signal from or to said second one of said two antennas”, as in claim 7 and 13.

5. Claims 14-18 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a transmitting-receiving station for use in radio wave diversity. Prior art references show similar methods but fail to teach: **“adjusting and holding a phase, level and delay time of the first signal to produce a third signal; composing the second signal and the third signal into a fourth signal”**, as in claim 14.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 703-305-8326. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone numbers

Art Unit: 2634

for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cicely Ware

cqw
February 11, 2005


AMANDA T. LE
PRIMARY EXAMINER